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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

18 JUL 2005

Applicant's or agent's file reference 117210-00022	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US03/25577	International filing date (day/month/year) 14 August 2003 (14.08.2003)	Priority date (day/month/year) 15 August 2002 (15.08.2002)
International Patent Classification (IPC) or national classification and IPC IPC(7): H04M 1/00 and US Cl.: 455/556.2		
Applicant KHYBER TECHNOLOGIES CORPORATION		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 3 sheets, including this cover sheet.  
☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 15 March 2004 (15.03.2004)	Date of completion of this report 01 February 2005 (01.02.2005)
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Brika A. Gary Telephone No. 703-305-4750

Form PCT/IPEA/409 (cover sheet)(July 1998)

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed.
- ☒ the description:  
pages 1-13 as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages NONE, as originally filed  
pages NONE, as amended (together with any statement) under Article 19  
pages NONE, filed with the demand  
pages 14-17, filed with the letter of 06 July 2004
- ☒ the drawings:  
pages 1-11, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages NONE, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/fig NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>1-30</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-30</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-30</u>	YES
	Claims <u>NONE</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-30 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the disclosed apparatus and method to provide user input/output functionality.

Claims 1-30 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

NEW CITATIONS

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AUG 24 2004

## CLAIMS

What is claimed is:

1. An apparatus to provide user input/output functionality, said apparatus comprising:
  - a user input/output unit providing at least one standalone input/output function, and capable of mechanically docking and electronically interfacing to an off-the-shelf personal digital assistant (PDA) to provide enhanced input/output functionality.
2. The apparatus of claim 1 wherein said user input/output unit comprises a hand-held housing unit that includes:
  - a docking port to accept said PDA for docking; and
  - a keypad for data entry and control.
3. The apparatus of claim 2 wherein said user input/output unit comprises a hand-held housing unit that includes an auxiliary display.
4. The apparatus of claim 1, wherein the input/output unit comprises at least one component of the group consisting of a microprocessor, a trigger switch, a scanner module, a docking connector, a communications transceiver, a PDA battery charging circuit, an auxiliary battery, a power supply, an auxiliary battery charging circuit, a wireless communications module, an antenna, at least one external connector, a heating element, an indicator, an audio amplifier circuit, an audio transducer.
5. The apparatus of claim 4, wherein said wireless communications module comprises at least one of a local area network (LAN) communication module and a wide area network (WAN) communication module.

6. The apparatus of claim 4, wherein said communications transceiver and said external connector provide a standard electronic connection to a personal computer (PC) or other data-gathering terminal.
7. The apparatus of claim 4 wherein said scanner module comprises at least one of a bar code scanner module and a radio frequency identification (RFID) scanner module.
8. The apparatus of claim 1 wherein said PDA includes any standard, off-the-shelf, commercial PDA having differing dimensional characteristics.
9. The apparatus of claim 2 wherein said hand-held housing unit has a reduced perimeter at said keypad to allow for a comfortable grip in one hand during use.
10. The apparatus of claim 3 wherein said auxiliary display is used when said PDA is un-docked from said hand-held housing unit.
11. The apparatus of claim 1 wherein said user input/output unit comprises a small, low-profile device to facilitate grasping with one hand.
12. The apparatus of claim 2 wherein said docking port includes open outside edges to allow PDA's of differing widths to dock with said hand-held housing unit.
13. The apparatus of claim 1 wherein said user input/output unit comprises a cellular telephone.
14. The apparatus of claim 1 wherein said user input/output unit comprises a keypad device for entering at least text and numbers when said keypad device is docked to said PDA.
15. The apparatus of claim 1 wherein said user input/output unit comprises:  
a cellular telephone; and

a keypad device for entering at least text and numbers when said keypad device is docked to said PDA.

16. The apparatus of claim 1 wherein said at least one standalone input/output function comprises at least one function of the group consisting of key-code data entry, bar code scanning, RF identification, transferring data to a PC, capturing image data, voice or data communications, transferring data via a local area network (LAN), and transferring data via a wide area network (WAN)
17. The apparatus of claim 1 wherein said enhanced input/output functionality comprises at least one function of the group consisting of data management, order entry, price verification, contact data base management, and data processing.
18. A method to provide user input/output capability, said method comprising:

mechanically docking an off-the-shelf personal digital assistant (PDA) to a user input/output unit; and

electronically interfacing said PDA to said user input/output unit as a result of said docking to form an enhanced user input/output device.
19. The method of claim 18 further comprising un-docking said PDA from said user input/output unit to provide an un-enhanced user input/output capability via said user input/output unit.
20. The method of claim 19 wherein said user input/output unit comprises a hand-held data entry housing unit that provides data entry functionality when undocked from said PDA.
21. The method of claim 19 wherein said user input/output unit comprises a cellular telephone that fully functions as a cellular telephone when undocked from said PDA.

22. The method of claim 19 further comprising performing bar code scanning with said user input/output unit.
23. The method of claim 19 further comprising performing radio frequency identification with said user input/output unit.
24. The method of claim 19 further comprising performing key entry with said user input/output unit.
25. The method of claim 19 further comprising connecting to a local area network (LAN) via said user input/output unit.
26. The method of claim 19 further comprising connecting to a wide area network (WAN) via said user input/output unit.
27. The method of claim 19 further comprising connecting to a personal computer (PC) via said user input/output unit.
28. The method of claim 21 further comprising docking said cellular telephone to a front face of said PDA to serve as a lid for said PDA to protect said front face of said PDA, and wherein said cellular telephone still functions as a cellular telephone when docked to said PDA.
29. The method of claim 21 further comprising docking said cellular telephone to a front face of said PDA to serve as a keypad input to said PDA, allowing a display of said PDA to be viewed while said cellular telephone is docked to said PDA.
30. The method of claim 18 wherein said enhanced user input/output device provides enhanced functionality comprising at least one function of the group consisting of data management, order entry, price verification, contact data base management, and data processing.

**AMENDED CLAIMS**

[received by the International Bureau on 10 February 2004 (10.02.04);  
original claims 1-30 replaced by new claims 1-30 (4 pages)]

**CLAIMS**

What is claimed is:

1. An apparatus to provide user input/output functionality, said apparatus comprising a portable user input/output unit, said input/output unit including a selectable docking port such that said input/output unit is capable of mechanically docking and electronically interfacing to at least two differing portable off-the-shelf PDA's, one at a time, to provide enhanced input/output functionality, and said input/output unit providing at least one standalone input/output function.
2. The apparatus of claim 1 wherein said user input/output unit comprises a hand-held housing unit that includes a keypad for data entry and control.
3. The apparatus of claim 1 wherein said user input/output unit comprises a hand-held housing unit that includes an auxiliary display.
4. The apparatus of claim 1, wherein said input/output unit comprises at least one component of the group consisting of a microprocessor, a trigger switch, a scanner module, a communications transceiver, a PDA battery charging circuit, an auxiliary battery, a power supply, an auxiliary battery charging circuit, a wireless communications module, an antenna, at least one external connector, a heating element, an indicator, an audio amplifier circuit, an audio transducer.
5. The apparatus of claim 4, wherein said wireless communications module comprises at least one of a local area network (LAN) communication module and a wide area network (WAN) communication module.
6. The apparatus of claim 4, wherein said communications transceiver and said external connector provide a standard electronic connection to a personal computer (PC) or other data-gathering terminal.



7. The apparatus of claim 4 wherein said scanner module comprises at least one of a bar code scanner module and a radio frequency identification (RFID) scanner module.
8. The apparatus of claim 1 wherein said PDA includes any standard, off-the-shelf, commercial PDA having differing dimensional characteristics and/or differing docking characteristics.
9. The apparatus of claim 2 wherein said hand-held housing unit has a reduced perimeter at said keypad to allow for a comfortable grip in one hand during use.
10. The apparatus of claim 3 wherein said auxiliary display is used when said PDA is un-docked from said hand-held housing unit.
11. The apparatus of claim 1 wherein said user input/output unit comprises a small, low-profile device to facilitate grasping with one hand.
12. The apparatus of claim 2 wherein said at least one docking port includes open outside edges to allow PDA's of differing widths to dock with said hand-held housing unit.
13. The apparatus of claim 1 wherein said user input/output unit comprises a cellular telephone.
14. The apparatus of claim 1 wherein said user input/output unit comprises a keypad device for entering at least text and numbers when said keypad device is docked to said PDA.
15. The apparatus of claim 1 wherein said user input/output unit comprises:
  - a cellular telephone; and
  - a keypad device for entering at least text and numbers when said keypad device is docked to said PDA.

AMENDED SHEET (ARTICLE 19)

16. The apparatus of claim 1 wherein said at least one standalone input/output function comprises at least one function of the group consisting of key-code data entry, bar code scanning, RF identification, transferring data to a PC, capturing image data, voice or data communications, transferring data via a local area network (LAN), and transferring data via a wide area network (WAN)
17. The apparatus of claim 1 wherein said enhanced input/output functionality comprises at least one function of the group consisting of data management, order entry, price verification, contact data base management, and data processing.
18. A method to provide user input/output capability, said method comprising:
  - docking a portable off-the-shelf personal digital assistant (PDA) to a portable user input/output unit, wherein said input/output unit includes a selectable docking port capable of docking to at least two differing portable off-the-shelf PDA's, one at a time; and
  - electronically interfacing said PDA to said user input/output unit as a result of said docking to form an enhanced user input/output device.
19. The method of claim 18 further comprising un-docking said PDA from said user input/output unit to provide an un-enhanced user input/output capability via said user input/output unit.
20. The method of claim 19 wherein said user input/output unit comprises a hand-held data entry housing unit that provides data entry functionality when undocked from said PDA.
21. The method of claim 19 wherein said user input/output unit comprises a cellular telephone that fully functions as a cellular telephone when undocked from said PDA.

AMENDED SHEET (ARTICLE 19)

22. The method of claim 19 further comprising performing bar code scanning with said user input/output unit.
23. The method of claim 19 further comprising performing radio frequency identification with said user input/output unit.
24. The method of claim 19 further comprising performing key entry with said user input/output unit.
25. The method of claim 19 further comprising connecting to a local area network (LAN) via said user input/output unit.
26. The method of claim 19 further comprising connecting to a wide area network (WAN) via said user input/output unit.
27. The method of claim 19 further comprising connecting to a personal computer (PC) via said user input/output unit.
28. The method of claim 21 further comprising docking said cellular telephone to a front face of said PDA to serve as a lid for said PDA to protect said front face of said PDA, and wherein said cellular telephone still functions as a cellular telephone when docked to said PDA.
29. The method of claim 21 further comprising docking said cellular telephone to a front face of said PDA to serve as a keypad input to said PDA, allowing a display of said PDA to be viewed while said cellular telephone is docked to said PDA.
30. The method of claim 18 wherein said enhanced user input/output device provides enhanced functionality comprising at least one function of the group consisting of data management, order entry, price verification, contact data base management, and data processing.

AMENDED SHEET (ARTICLE 19)